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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,404	02/12/2002	Rudolf Gartner	22750/525	7026

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EXAMINER

JUSKA, CHERYL ANN

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/074,404

Applicant(s)

GARTNER ET AL.

Examiner

Cheryl Juska

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11, 12, 14, 16, 18 and 20-33 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 11, 12, 14, 16, 18 and 20-33 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Response to Amendment

2. Applicant's amendment filed May 15, 2006, has been entered. Claims 11, 21-24, 26, 27, 30, and 31 have been amended as requested. Claims 1-10, 13, 15, 17, and 19 have been cancelled. Thus, the pending claims are 11, 12, 14, 16, 18, and 20-33.

3. Said amendment is sufficient to withdraw the 112, 2nd rejections set forth in section 6-8 of the last Office Action (01/11/06).

4. Said amendment is also sufficient to withdraw the rejections based upon Radwanski (US 4,879,170) as set forth in sections 11 and 13-15 of the last Office Action. Specifically, said amendment eliminates the embodiment of bonding fibers or filaments of 1-5 dtex by hydroentangling alone (i.e., without needling), as is taught by Radwanski. However, said amendment reinstates the embodiment of bonding fibers or filaments of 6-15 dtex by needling alone (i.e., without hydroentangling). As such, the prior art rejection based upon Watanabe (JP

10-273873) previously set forth in section 13 of the Office Action mailed 07/13/05 is reinstated below.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 11, 12, 14, 16, 18, and 20-33 stand rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claims 11, 12, 14, 16, 18, and 20-33 stand rejected for the use of the term “thermosetting” as set forth in the previous Office Actions. Applicant traverses the rejection by asserting that “the term ‘thermosetting,’ in the context of a method of manufacturing a spunbonded nonwoven from a thermoplastic polymer, reasonably clearly conveys to one of ordinary skill in the art the process of simultaneously heating and compacting the nonwoven, for example, using a heated structured calender” (Amendment, paragraph spanning pages 5-6). The examiner respectfully disagrees. Given the accepted meaning of “thermosetting” in the art, one would not construe the use of said term as interpreted by applicant. At most, one might assume, due to the context of the process of making a nonwoven from a thermoplastic polymer, that the term “thermosetting” is merely descriptive of heat setting/shaping (i.e., application of heat to said thermoplastic nonwoven) as opposed to cross-linking or curing thereof. However, one cannot extrapolate this to include application of pressure (i.e., compacting) as asserted by

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applicant. Therefore, the rejection stands because it is not reasonably clear to one skilled in the art what applicant intends to encompass by the claim language.

8. Claims 22, 24, 27, and 31 stand rejected for being indefinite for limiting the fibers or filaments to a titer of 3-12 dtex. While the parent claim has been amended to include the step of (a) bonding fibers or filaments having a titer of 6-15 dtex *or* (b) bonding fibers or filaments having a titer of 1-5 dtex, said amendment is insufficient to overcome the 112, 2nd rejection. Specifically, the fiber or filaments having a range of 6-15 dtex are optional. Hence, limiting the fibers or filaments to a titer of 3-12 dtex is still indefinite because the fibers or filaments having a range of 6-15 dtex are not positively recited as a component of the invention.

9. Claim 11 is indefinite for the lack of antecedent basis for the new recitation of “between individual needling stages” since the claims do not recite one or more needling stages. For the purposes of examination, the claim is interpreted as the stretching step occurring after a needling step.

10. Claims 21-24, 26, 27, 30, and 31 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In an attempt to overcome the 112, 2nd rejection, applicant has amended said modulus phrase from “a 5% modulus value in the machine direction $> (x)N/5$ cm, but at least $(y) Nm^2/g$ ” to “a 5% modulus value in the machine direction $> (x)N/5$ cm, and a specific modulus of at least $(y) Nm^2/g$.” Said amendment renders said phrase definite but is considered new matter

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because the specification as originally filed does not provide support for the claimed “specific modulus” value.

Claim Rejections - 35 USC § 103

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claims 11, 12, 14, 16, 18, and 20-33 are rejected under 35 USC 103(a) as being unpatentable over JP 10-273873 issued to Watanabe in view of DE 29 00 888 and EP 13355 issued to Hammerschmidt et al.

Watanabe teaches a base fabric for tufted carpets comprising a nonwoven fabric layer A consisting of continuous filaments having a fiber size of 2-6 denier (2.2-6.6 dtex) and nonwoven fabric layer B consisting of continuous filaments having a fiber size of 6-15 denier (6.6-16.6 dtex) (abstract). The two fiber layers are interlaced by needlepunching (abstract). The needled nonwoven is then pressure welded with heat (abstract).

Thus, Watanabe teaches the claimed invention with the exception of the stretching step. However, it is well known in the art to stretch a nonwoven in order to further improve the strength and stability thereof. For example, DE 29 00 888 teaches stretch a spunbond nonwoven by 20-100% of the original length, while Hammerschmidt teaches a needlepunched nonwoven that is stretched 20-200% of the original length in order to increase the strength thereof. Hence, it would have been obvious to one skilled in the art to stretch the needled nonwoven of Watanabe in order to increase the strength and stability thereof.

With respect to the claimed drying step, it is argued that the needlepunched fabric need not be dried since it is not subjected to a water treatment. Alternatively, it is argued that any material which is wet will inherently be subjected to a drying step even if left at ambient temperature. Therefore, claim 11 is rejected.

With respect to claims 12 and 29, while the cited prior art fails to teach a finishing agent for improving mobility of the fibers or filaments, it is argued said claim is obvious over the art. Specifically, finishing agents for improving mobility (i.e., lubricating oils) are conventional in the textile art. Applicant is hereby given Official Notice of this fact. To adequately traverse such a finding, applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art. Therefore, it would have been readily obvious to one skilled in the art to employ a lubricant in order to aid in mobility of the fibers during needlepunching and/or stretching.

Regarding claim 14, while the cited prior art fails to teach an additional treatment with a pair of heated rollers, it is argued said claims are obvious. Specifically, it is well known in the art that calendaring a fabric (i.e., treatment between a pair of heated rollers) is a conventional finishing step. Applicant is hereby given Official Notice of this fact. Therefore, it would have been readily obvious to one skilled in the art to calendar the nonwoven of the cited prior art in order to produce a finished product.

Additionally, regarding claims 16, 18, and 20, while the cited prior art fails to teach calendaring with rollers having embossing points (i.e., embossing), it is argued said claims are obvious. Specifically, embossing is a well known method of bonding nonwovens and/or creating

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a textured surface of a nonwoven. Applicant is hereby given Official Notice of this fact.

Therefore, it would have been readily obvious to one skilled in the art to emboss the nonwoven of the cited prior art in order to produce a bonded and/or textured product. Furthermore, the claimed surface roughness and the shape and area of embossing points are deemed obvious over the prior art. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 205 USPQ 215. The surface roughness, point shape and area are all variables that one skilled in the art can readily determine in order to produce a desired bond area and texture. Therefore, claims 16, 18, and 20 are also rejected.

Regarding the limitations to mass per unit area and density, the prior art fails to teach these limitations. However, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Therefore, it would have been readily obvious to one skilled in the art to select an appropriate basis weight and/or density in order to produce a desired weight and thickness of the final end-product. Additionally, the claimed modulus values would obviously be provided upon modification of the Watanabe invention by the teachings of the prior art. Like materials cannot have mutually exclusive properties. Therefore, claims 21, 22, 24, 27, 30, and 31 are rejected.

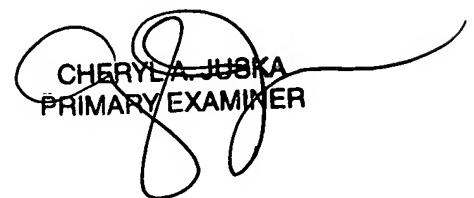
With respect to the limitations that the nonwoven is polyethylene terephthalate (i.e., polyester) or polypropylene, the cited prior art fails to explicitly teach the fiber materials employed. However, it is argued these limitations are obvious over the art. Specifically, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. Polyester and

polypropylene are two very common fiber compositions employed in nonwoven materials. Additionally, the claimed modulus values would obviously be provided upon modification of the Watanabe invention by the teachings of the prior art. Like materials cannot have mutually exclusive properties. Therefore, claims 23, 25, 26, 28, 32, and 33 are also rejected.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Juska whose telephone number is 571-272-1477. The examiner can normally be reached on Monday-Friday 10am-6pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached at 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


CHERYL A. JUSKA
PRIMARY EXAMINER